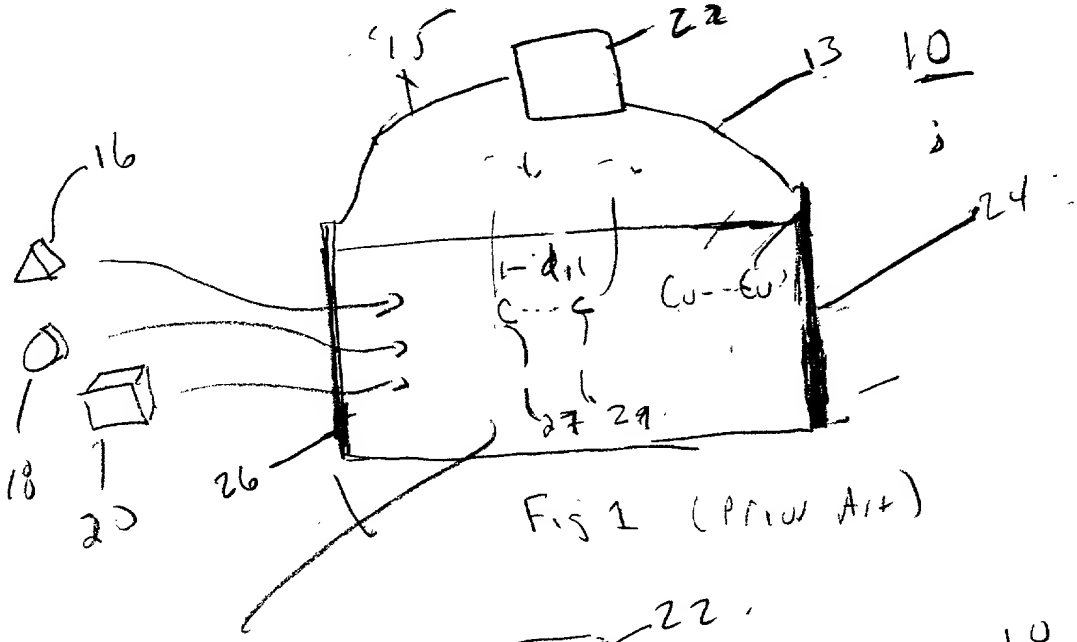


Fig 1 (Prior Art)

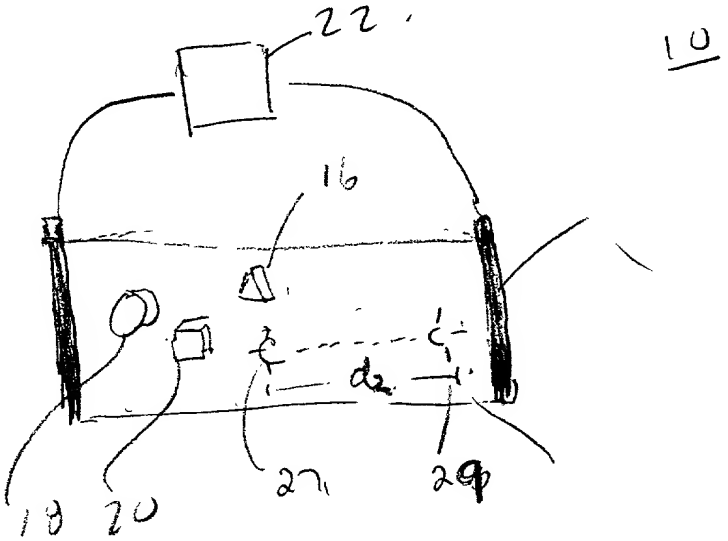


Fig 2 (Prior Art)

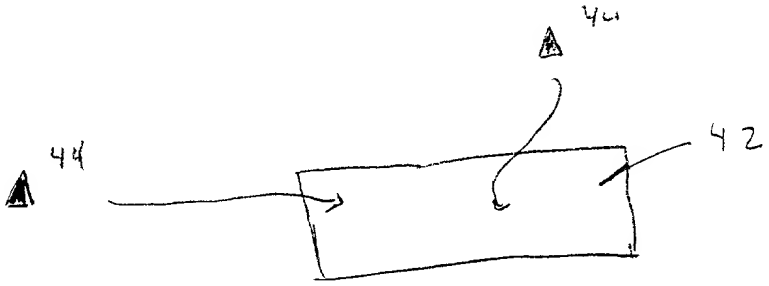


FIG 3A (PRIOR ART)

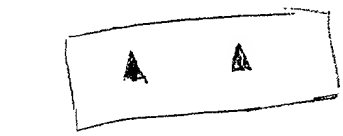


FIG 3B (PRIOR ART)

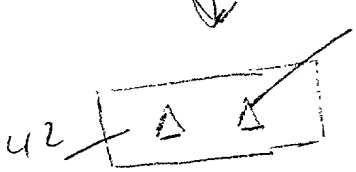


FIG 3C (PRIOR ART)

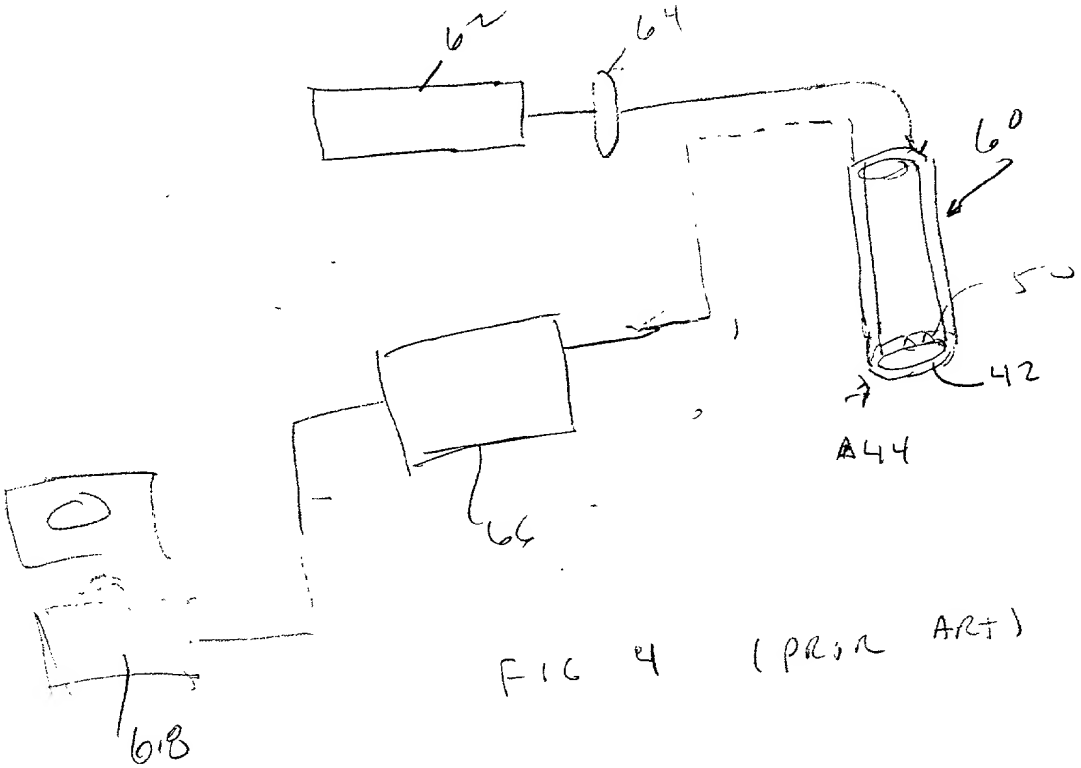


FIG 4 (PRIOR ART)

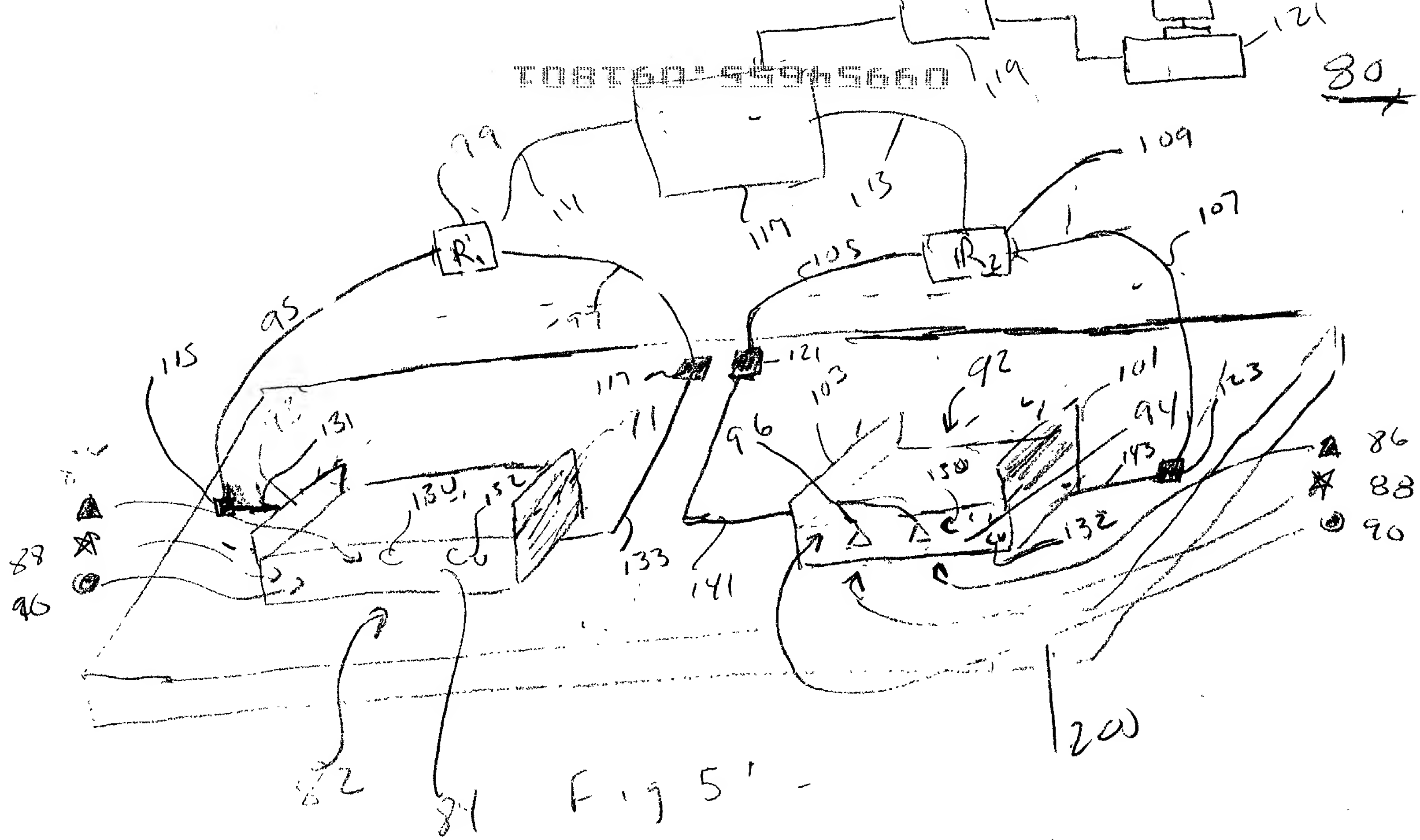
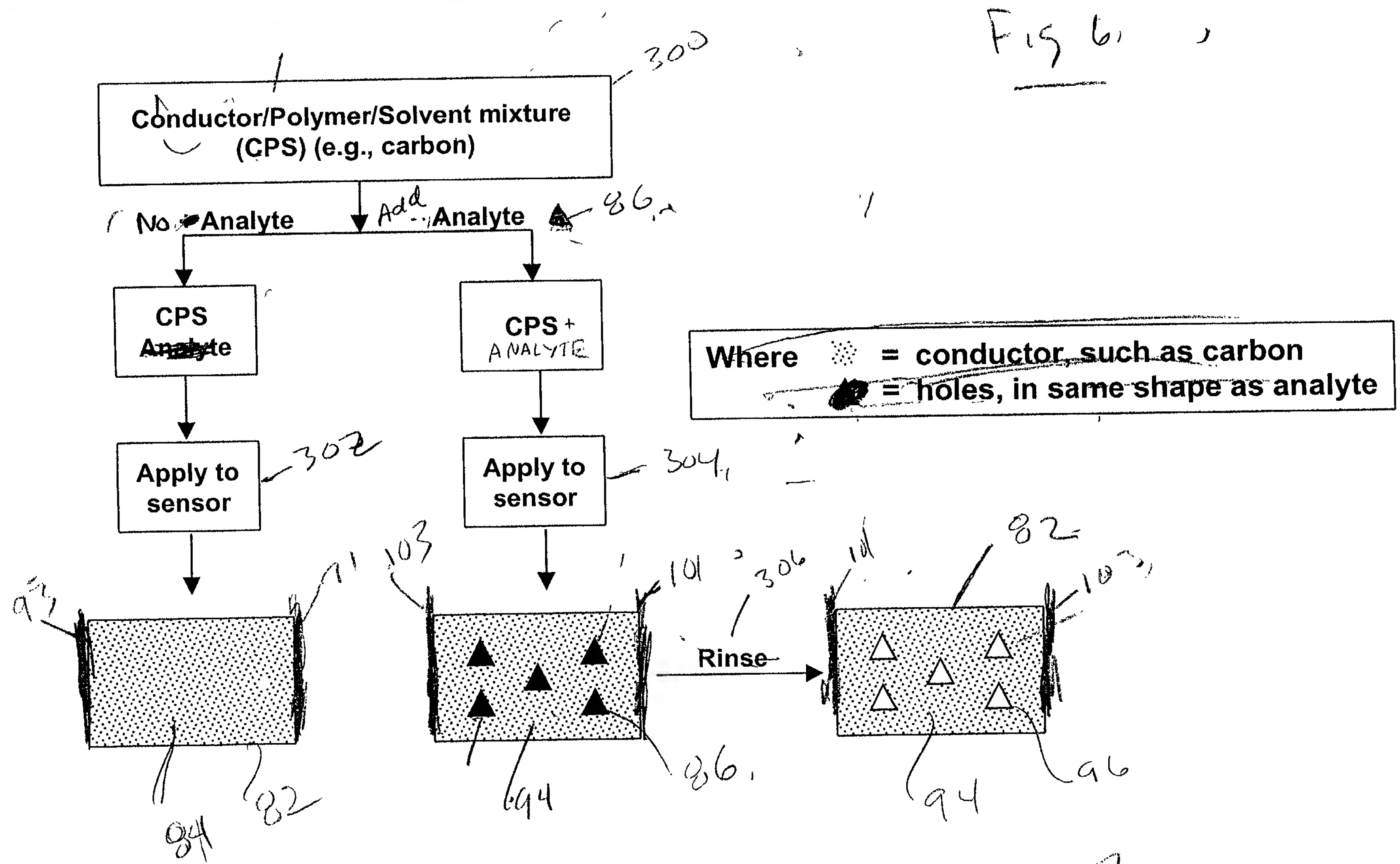


Fig 5'

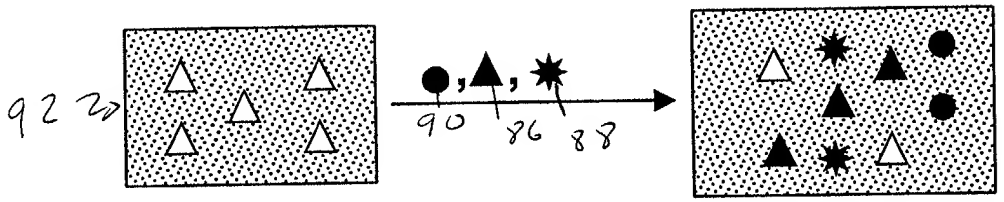
Flowchart for Molecular Recognition Paired Sensors Fabrication

Fig 6



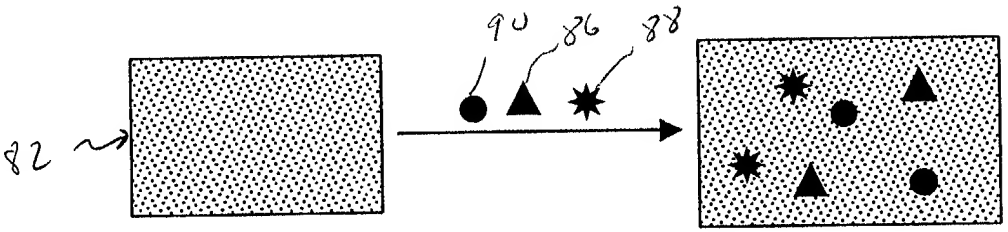
Resistive Detection Exposure of Molecular Recognition Paired Sensors

1) Add mixture (gas or liquid) containing analyte plus interferents to resistance detector



Resistance = R1

Resistance = R2



Resistance = R3

Resistance = R4

△ = hole with shape of analyte
▲ = analyte
● = interferent A
✸ = interferent B

2) Measure R1, R2, R3, R4. At low concentrations of analyte of interest Δ analyte is aborbed into cavities and does not contribute to resistance. Resistance only increases if there are no cavities, and this absorbed chemical leads to resistance increase. See sheet of equations.

3) Calculate R▲ resistance change due to analyte of interest from R1, R2, R3, R4

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Fig 7

80

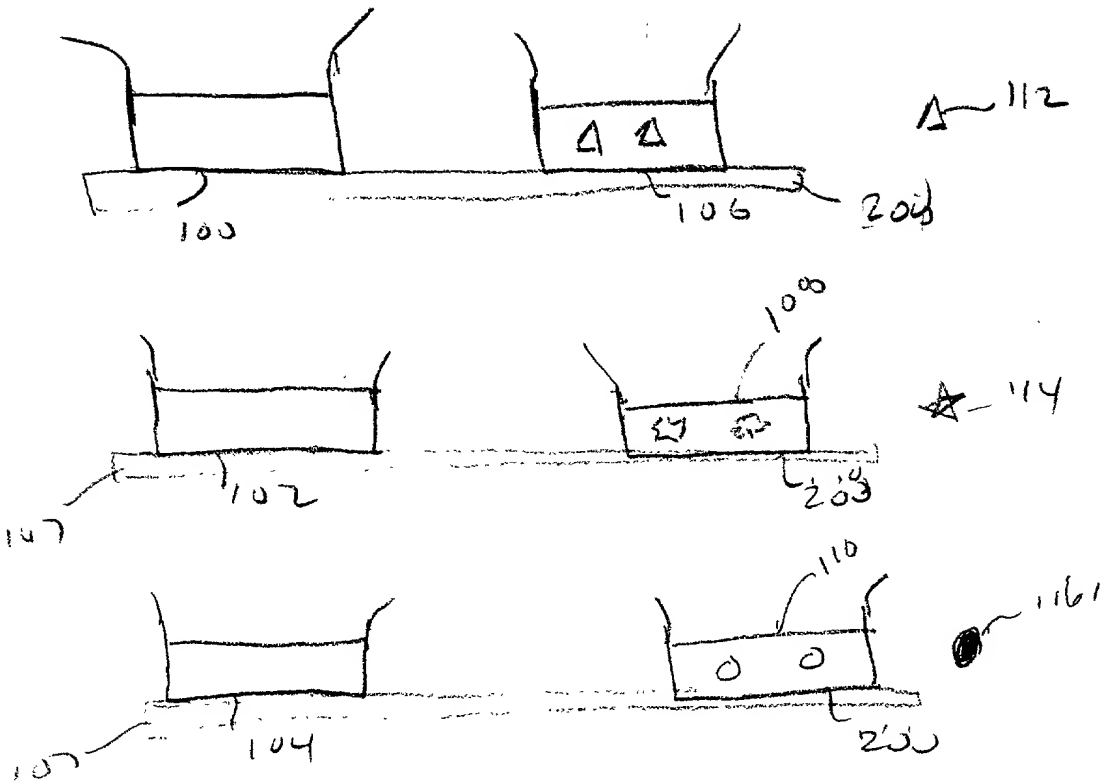

Fig. 8

Resistive Network for Exposure of Molecular Recognition Sensors

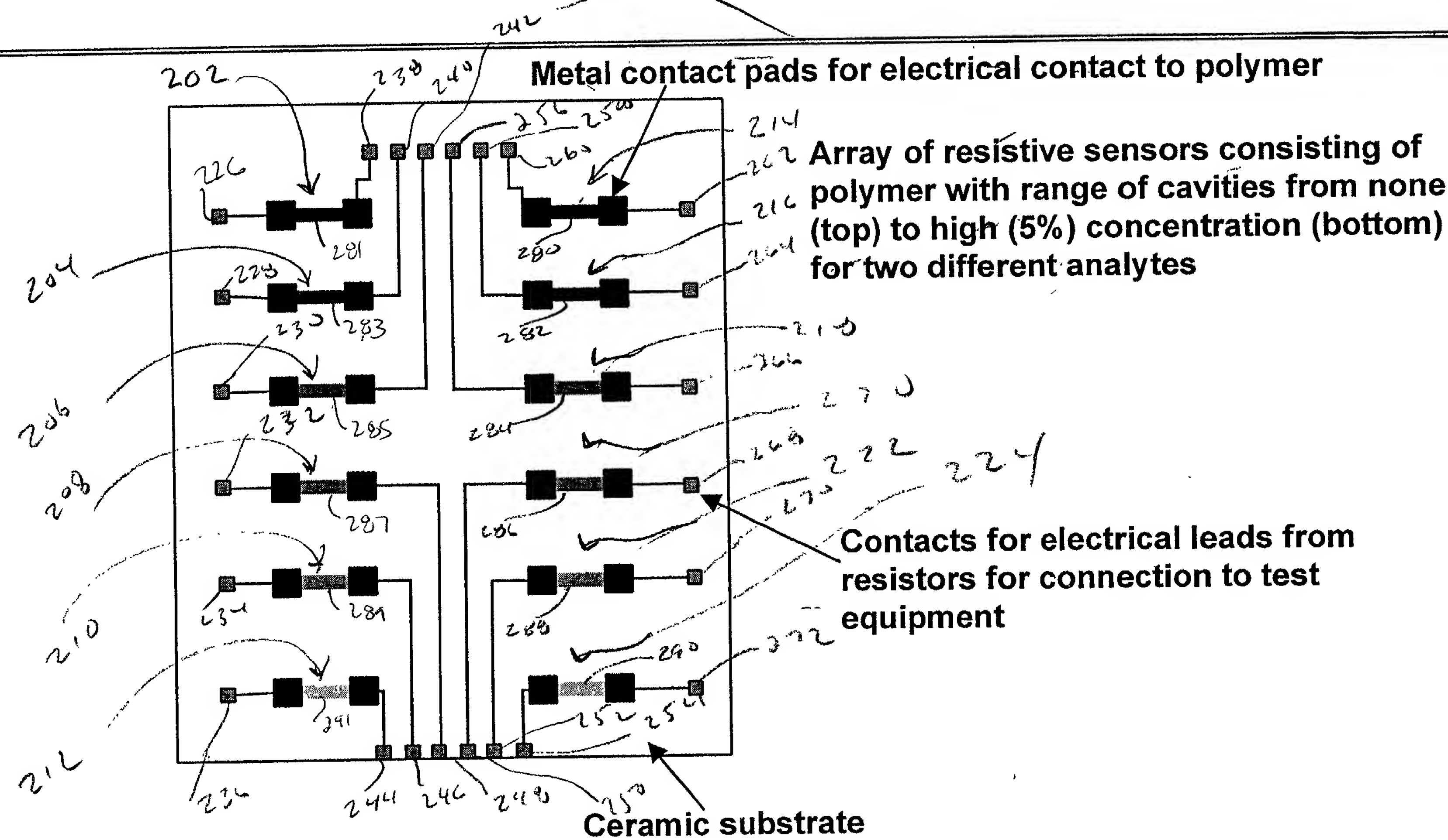

Fig. 9

#*

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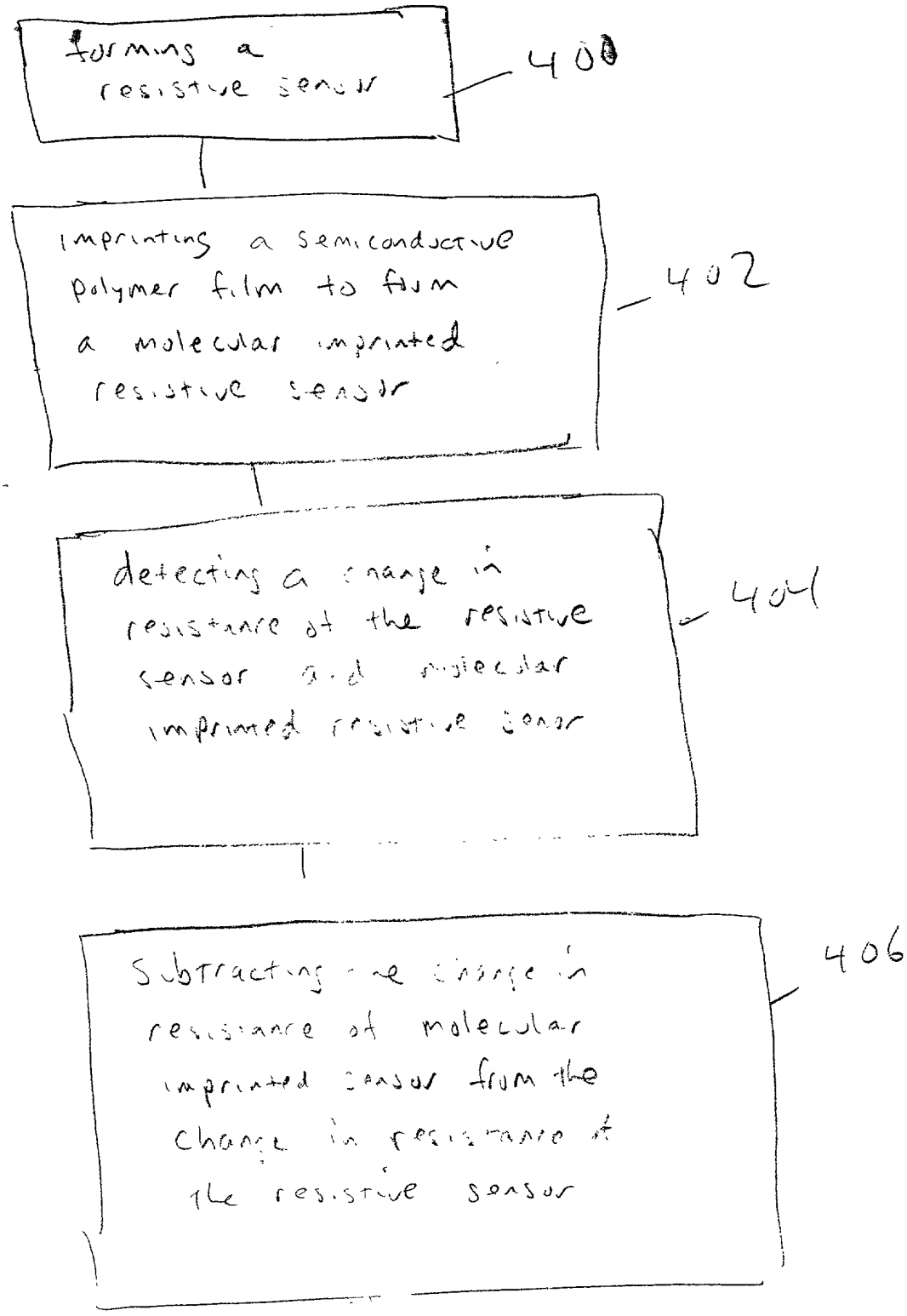
forming a resistive sensor
400
imprinting a semiconductive polymer film to form a molecular imprinted resistive sensor
402
detecting a change in resistance of the resistive sensor and molecular imprimed resistive sensor
404
Subtracting the change in resistance of molecular imprinted sensor from the change in resistance of the resistive sensor
406

Fig 10